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121145

4th Sem. / Food Technology

Subject : Principles Of Food Engineering

Time : 3 Hrs. M.M. : 100

SECTION-A

Note: Very Short Answer type questions. Attempt any 15 parts. (15x2=30)

Q.1 a) Radiation

b) Pump

c) Absolute pressure

d) Separation

e) Thermal processing

f) Volatility

g) Sieving

h) Energy

i) Agitating

j) Thousand grains weight

SECTION-C

Note: Long answer type questions. Attempt any three questions. 3x10=30

Q.3 Describe a psychrometer and the precautions to be taken while using psychrometer.

Q.4 What is heat transfer? Explain various modes of heat transfer.

Q.5 What is a boiler? Classify it.

Q.6 What is the physical properties of food material? Give its applications.

Q.7 What is Reynolds number? How is it important in case of Flow in pipe?

k) MKS unit system means _____

l) Bulk density

m) Enthalpy

n) Porosity

o) Food engineering

p) Distillation

q) Diffusion

r) Reverse osmosis.

SECTION-B

Note: Short answer type questions. Attempt any ten parts 10x4=40

Q.2 i) What is thermal conductivity?

ii) What is an autoclave? How does it work?

iii) Write a note on scraped surface heat exchanger.

iv) Differentiate between U-tube and well type manometer.

v) What is an evaporator? How an air conditioning evaporator works?

vi) What is the importance of thermal properties of food?

vii) What are supplementary units?

viii) What are the fluid flow characteristics?

ix) Differentiate between latent heat and specific heat.

x) Give the principle of energy balance.

xi) What is a pump? Enlist different types of pumps used in food industry.

xii) What is pneumatic drier? Explain its working?

xiii) What are the basic principles of material handling?

xiv) Enlist different types of drier.

xv) Name some good conductors of heat, some poor conductors.